COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

FIRST SET OF INFORMATION REQUESTS OF NSTAR GAS COMPANY TO THE DIVISION OF PIPELINE ENGINEERING AND SAFETY
D.T.E. 05-36
November 30, 2005

Person Responsible: Christopher Bourne

Information Request: NSTAR 1-30

Please explain the basis of the Division's conclusion that the Company was required to maintain documentation of the test results for the maximum allowable operating pressure of the gas pipeline facilities located at 65 Main Street in Hopkinton when those facilities were installed in 1974 and 1979. Please provide a copy of and citation to any and all regulations in effect at that time that support that conclusion.

Response

The federal pipeline safety regulations, 49 C.F.R. Part 192, went into effect in 1970. These included a requirement for each section of a pipeline to have a maximum allowable operating pressure (MAOP). The methods of establishing the MAOP for a pipeline section are contained in 49 C.F.R. § 192.619: Maximum allowable operating pressure: Steel or plastic pipelines. The regulation, as originally adopted, states:

> "(a) Except as provided in paragraph (c) of this section, no person may operate a segment of steel or plastic pipeline at a pressure that exceeds the lowest of the following:
>
> (1) The design pressure of the weakest element in the segment, determined in accordance with Subparts C and D of this part.
>
> (2) The pressure obtained by dividing the pressure to which the segment was tested after construction as follows:
>
> (i) For plastic pipe in all locations, the test pressure is divided by a factor of 1.5.
>
> (ii) For steel pipe, the test pressure is divided by a factor determined in accordance with the following table:

Class location	Factor Segment installed before (Nov. 12, 1970)	Segment installed after (Nov. 11, 1970)
1	1.1	1.1
2	1.25	1.25
3	1.4	1.5
4	1.4	1.5

(3) The highest actual operating pressure to which the segment was subjected during the 5 years preceding July 1, 1970, unless the segment was tested in accordance with paragraph (a)(2) of this section after July 1, 1965, or the segment was uprated in accordance with Subpart K of this part.

(4) For furnace butt welded steel pipe, a pressure equal to 60 percent of the mill test pressure to which the pipe was subjected.

(5) For steel pipe other than furnace butt welded pipe, a pressure equal to 85 percent of the highest test pressure to which the pipe has been subjected, whether by mill test or by the post installation test.

(6) The pressure determined by the operator to be the maximum safe pressure after considering the history of the segment, particularly known corrosion and the actual operating pressure.

(b) No person may operate a segment to which paragraph (a)(6) of this section is applicable unless over-pressure protective devices are installed on the segment in a manner that will prevent the maximum allowable operating pressure from being exceeded, in accordance with §192.195.

(c) Notwithstanding the other requirements of this section, an operator may operate a segment of pipeline found to be in satisfactory condition, considering its operating and maintenance history, at the highest actual operating pressure to which the segment was subjected during the 5 years preceding July 1, 1970, subject to the requirements of §192.611."

49 C.F.R. § 192.619

The August 19, 1970 Federal Register notice adopting Part 192 is attached as NSTAR Exhibit 1-30(A).

This section has been amended several times since then. The regulation, as it read in 1974, states:

"(a) Except as provided in paragraph (c) of this section, no person may operate a segment of steel or plastic pipeline at a pressure that exceeds the lowest of the following:

(1) The design pressure of the weakest element in the segment, determined in accordance with Subparts C and D of this part.

(2) The pressure obtained by dividing the pressure to which the segment was tested after construction as follows:

(i) For plastic pipe in all locations, the test pressure is divided by a factor of 1.5.

(ii) For steel pipe operated at 100 p.s.i.g. or more, the test pressure is divided by a factor determined in accordance with the following table:

	Factors 1	
Class location	Segment installed before (Nov. 12, 1970)	Segment installed after (Nov. 11, 1970)
1	1.1	1.1
2	1.25	1.25
3	1.4	1.5
4	1.4	1.5

1 For offshore segments installed or uprated after July 31, 1977, that are not located on a platform, the factor is 1.25. For segments installed on offshore platforms or on a platform on inland navigable waters, including a pipe riser, the factor is 1.5.

(3) The highest actual operating pressure to which the segment was subjected during the 5 years preceding July 1, 1970, unless the segment was tested in accordance with paragraph (a)(2) of this section after July 1, 1965, or the segment was uprated in accordance with Subpart K of this part.

(4) For furnace butt welded steel pipe, a pressure equal to 60 percent of the mill test pressure to which the pipe was subjected.

(5) For steel pipe other than furnace butt welded pipe, a pressure equal to 85 percent of the highest test pressure to which the pipe has been subjected, whether by mill test or by the post installation test.

(6) The pressure determined by the operator to be the maximum safe pressure after considering the history of the segment, particularly known corrosion and the actual operating pressure.

(b) No person may operate a segment to which paragraph (a)(6) of this section is applicable unless over-pressure protective devices are installed on the segment in a manner that will prevent the maximum allowable operating pressure from being exceeded, in accordance with §192.195.

(c) Notwithstanding the other requirements of this section, an operator may operate a segment of pipeline found to be in satisfactory condition, considering its operating and maintenance history, at the highest actual operating pressure to which the segment was subjected during the 5 years preceding July 1, 1970, subject to the requirements of §192.611."

The August 9, 1976 Federal Register Notice of Amendment is attached as NSTAR 1-30(B).

The regulation, as it read in 1979, states:

"(a) Except as provided in paragraph (c) of this section, no person may operate a segment of steel or plastic pipeline at a pressure that exceeds the lowest of the following:

(1) The design pressure of the weakest element in the segment, determined in accordance with Subparts C and D of this part.

(2) The pressure obtained by dividing the pressure to which the segment was tested after construction as follows:

(i) For plastic pipe in all locations, the test pressure is divided by a factor of 1.5.

(ii) For steel pipe operated at 100 p.s.i.g. or more, the test pressure is divided by a

factor determined in accordance with the following table:

Class location	Factors 1 Segment Installed before (Nov. 12, 1970)	Installed after (Nov. 11, 1970)	Converted under § 192.614
1	1.1	1.1	1.25
2	1.25	1.25	1.25
3	1.4	1.5	1.5
4	1.4	1.5	1.5

1 For offshore segments installed, uprated, or converted after July 31, 1977, that are not located on an offshore platform, the factor is 1.25. For segments installed, uprated, or converted after July 31, 1977, that are located on an offshore platform or on a platform in inland navigable waters (including a pipe riser), the factor is 1.5.

(3) The highest actual operating pressure to which the segment was subjected during the 5 years preceding July 1, 1970, unless the segment was tested in accordance with paragraph (a)(2) of this section after July 1, 1965, or the segment was uprated in accordance with Subpart K of this part.

(4) For furnace butt welded steel pipe, a pressure equal to 60 percent of the mill test pressure to which the pipe was subjected.

(5) For steel pipe other than furnace butt welded pipe, a pressure equal to 85 percent of the highest test pressure to which the pipe has been subjected, whether by mill test or by the post installation test.

(6) The pressure determined by the operator to be the maximum safe pressure after considering the history of the segment, particularly known corrosion and the actual operating pressure.

(b) No person may operate a segment to which paragraph (a)(6) of this section is applicable unless over-pressure protective devices are installed on the segment in a manner that will prevent the maximum allowable operating pressure from being exceeded, in accordance with §192.195.

(c) Notwithstanding the other requirements of this section, an operator may operate a segment of pipeline found to be in satisfactory condition, considering its operating and maintenance history, at the highest actual operating pressure to which the segment was subjected during the 5 years preceding July 1, 1970, subject to the requirements of §192.611."

The November 18, 1977 Federal Register Notice of Amendment is attached as NSTAR 1-30(C).

NSTAR alleges that it pressure tested the portion of the pipeline that served 65 Main Street, Hopkinton, to 1.5 times the proposed MAOP. However, NSTAR does not have any record of the pressure test having been performed or the pressure at which it was performed. Therefore, the Division concludes that NSTAR cannot show that they have established a MAOP for that portion of the pipeline.

The basis for the Division's conclusion is contained in three letters from the federal government. In a letter of interpretation, that it issued on March 9, 1998, the Office of Pipeline Safety, U. S. Department of Transportation ("OPS") stated in part:

> "Because § 192.619(a)(2) is a federal pipeline safety standard, operators are obligated by law to provide, upon request of government inspectors, credible information to demonstrate compliance with § 192.619(a)(2). This information would include evidence of the test pressure used to calculate MAOP."

The letter is attached as Exhibit NSTAR 1-30(D).

Two additional letters were issued on March 26, 1996. In these letters, OPS denied waiver requests from two gas operators. The operators were required to maintain construction documents for the life of the pipeline. The first letter states in the relevant part:

> "The Research and Special Programs Administration's Office of Pipeline Safety (OPS) is unable to approve Coastal's request for a waiver from the requirements of 49 CFR §§ 192.243, 192.303, and 192.605 to maintain original construction documentation for the life of a pipeline. In order for this waiver to be granted , Coastal must provide an alternative to the requirements and OPS must find that the alternative proposal provides an equal or greater level of safety."

The letter is attached as NSTAR Exhibit 1-30(E)

The second letter states in the relevant part:

> "The Research and Special Programs Administration's Office of Pipeline Safety (OPS) is unable to approve Louisiana Offshore Gathering System's request for a waiver from the requirements of 49 CFR §§ 192.243, 192.303, and 192.605 to maintain original construction documentation for the life of a pipeline. In order for this waiver to be granted, Louisiana Offshore must provide an alternative to the requirements and OPS must find that the alternative proposal provides an equal or greater level of safety."

The letter is attached as NSTAR Exhibit 1-30(F).

Please see response to information requests NSTAR 1-7, 1-8, and 1-28.

Interpretation 192.619 31
March 9, 1998

US Department of Transportation

Research and Special Programs Administration

Mr. Thomas W. Valenti
Manager, Gas Engineering & Construction
Baltimore Gas and Electric Company
Baltimore, MD 2103-1475

Dear Mr. Valenti:

I am responding to your November 25, 1997, letter to the Associate Administrator about the gas pipeline safety regulations in 49 CFR Part 192. Specifically, you asked if the maximum allowable operating pressure (MAOP) rule in § 192.619 requires operators to keep records of pressure tests done on steel and plastic service lines under §§ 192.511 and 192.513.

In Part 192, the recordkeeping requirements for pressure tests are in § 192.517. These requirements do not apply to pressure tests done under §§ 192.511 and 192.513. Section 192.619 does not include a separate recordkeeping requirement for pressure tests.

However, the MAOP of pipelines tested under §§ 192.511 and 192-513 is governed by § 192-619. And, for plastic pipe or steel pipe operated at 100 psig or more, § 192.619(a)(2) bases M.AOP on test pressure. Because § 192.619(a)(2) is a federal pipeline safety standard, operators are obligated by law to provide, upon request of government inspectors, credible information to demonstrate compliance with § 192.619(a)(2). This information would include evidence of the test pressure used to calculate NUOP,

I trust you find this response helpful. Please call me at (202) 366-4565 if you need further clarification.

Richard D. Huriaux, P.E,
Director for Technology and Standards
Office of Pipeline Safety

US Department of Transportation
Research and Special Programs Administration

March 26, 1996

Ms. Susan Becnel
Regulatory Coordinator
The Coastal Corporation
Coastal Tower
Nine Greenway Plaza
Houston, TX 77045-0995

Dear Ms. Becnel:

The Research and Special Programs Administration's Office of Pipeline Safety (OPS) is unable to approve Coastal's request for a waiver from the requirements of 49 CFR §§ 192.243, 192.303, and 192.605 to maintain original construction documentation for the life of a pipeline. In order for this waiver to be granted , Coastal must provide an alternative to the requirements and OPS must find that the alternative proposal provides an equal or greater level of safety.

If you have any further questions, please contact me or L.E. Herrick at (202) 366-5523 (online herrickl@rspa.dot.gov).

Sincerely,

Richard B. Felder
Associate Administrator for Pipeline Safety

Herrick:jmd:64046:3-26-96
cc: DPS-1,2,10,20,Regions
TSI-Email, StateMailing

Waiver 192.605 3 of 3
March 26, 1996

Mr. John Locantro
Manager - Operations
Louisiana Offshore Gathering Systems, L.L.C.
7400 Texas Commerce Tower
600 Travis
Houston, TX 77002

Dear Mr. Locantro:

The Research and Special Programs Administration's Office of Pipeline Safety (OPS) is unable to approve Louisiana Offshore Gathering System's request for a waiver from the requirements of 49 CFR §§ 192.243, 192.303, and 192.605 to maintain original construction documentation for the life of a pipeline. In order for this waiver to be granted , Louisiana Offshore must provide an alternative to the requirements and OPS must find that the alternative proposal provides an equal or greater level of safety.

If you have any further questions, please contact me or L.E. Herrick at (202) 366-5523 (online herrickl@rspa.dot.gov).

Sincerely,

Richard B. Felder
Associate Administrator for Pipeline Safety

Herrick:jmd:64046:3-26-96
cc: DPS-1,2,10,20,Regions
TSI-Email, StateMailing